<u>AMENDMENTS TO THE DRAWINGS</u>:

The attached drawing sheets include replacement Figure 2 and new Figures 2A and 2B.

Attachment: Replacement Figure 2,
New Figures 2A and 2B

<u>REMARKS</u>

The application has been amended to place it in condition for allowance at time of the next Official Action.

Additional drawing Figures are submitted based on Figure 2 adding crossed polarizers (see also page 11, lines 1-27), polarizing microscope (see also page 14, lines 15-18), optical microscope (see page 7, line 11), quarter-wave plate (see page 7, line 16), Petri dish (see page 7, line 6) and a differential interferential contrast device.

As these devices are conventional devices and their detailed illustration is not essential for a proper understanding of the invention, the above noted devices are illustrated in the form of a labeled representation, i.e., the labeled rectangular box. The above is believed sufficient to address the drawing objection under 37 C.F.R. § 183a while not introducing new matter.

As to the objection based on angles θ_0, $\Delta\theta_0$, it is believed that these angles correspond with the description on page 10, lines 3-7 as shown in Figure 2. However, in order to clarify this feature, the brackets < > have been removed from Figure 2. In view of this, the drawing objections are believed addressed and withdrawal of the same is respectfully requested.

The specification is amended to include section headings and to address the informalities noted on page 3 and 4 of the Official Action. The changes are believed not to introduce new matter.

Claims 1-21 were previously pending in the application. New claims 22-28 are added. Therefore, claims 1-28 are presented for consideration.

The present amendment addresses the claim objections noted on pages 4 and 5 the Official Action. Please note that the only symbols not defined are S and P which are understood as the S and P polarizations. See also page 8, lines 10-11 of the specification.

As to the objection to claims 12, 13 and 14 as not being supported by the specification, the table noted in claim 12 is also in the specification page 31 between lines 15 and 20, the table in claim 13 is on specification page 32 between lines 10 and 15 and the table noted in claim 14 is on page 35 between lines 1 and 5. Accordingly, the specification is believed to support the claims and the objection to claims 12, 13 and 14 should be withdrawn.

As to the structure of the claims, each of the claims is believed to recite the necessary structure in the body of the claims.

Claims 1-3 and 11-14 were rejected under 35 U.S.C. § 112, second paragraph. That rejection is respectfully traversed.

Claims 1-13 are amended to change the term "incoherent" to "spatially incoherent" to clarify the type of incoherency. The above is believed sufficient to address the rejection as to these claims.

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As to claims 11-14, as noted above, the tables are supported in the specification and include the materials used to execute the invention including gold, silver, aluminum and nickel. Accordingly, withdrawal of the rejection as to these claims is respectfully requested.

Claims 1-3 are amended to provide a reference axis for the angle θ_0 and to provide the structural relationship between the substrate and the layer. Accordingly, withdrawal of the 35 U.S.C. § 112, second paragraph rejection as to these claims is respectfully requested.

Claims 1-10, 15, 17 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over AZZAM et al. ("Ellipsometry and Polarized Light", AZZAM and BASHARA, North Holland Elsevier Science Publishers, 1989) in view of SANDSTROEM et al. ("Visual detection of organic monomolecular films by interference colors", Applied Optics, Vol. 24, No. 4, 15 February 1985). That rejection is respectfully traversed.

AZZAM is an excerpt of a general book on ellipsometry. Basically, it discloses the expressions for the Fresnel coefficients for a system constituted by a substrate, a dielectric layer and an ambient medium. These expressions are well known to any optician.

SANDSTROEM teaches (section II.A) that it is possible to use a support constituted by a substrate and antireflection layer to ease the observation of a monomolecular organic layer.

The Examiner considers that AZZAM and SANDSTROEM, taken in combination, teach all the features of claims 1 — 4. This opinion is based on the assumption that the four conditions:

$$\frac{d^2}{de_1^2}\ln|\sigma|^2 = 0 \quad \text{(claim 1)}$$

$$\frac{d}{de_1}\left|\sigma^2\right| = 0 \quad \text{(claim 2)}$$

$$\frac{d}{de_1}\left(\frac{|\sigma|^2}{R_{NP}}\right) = 0 \quad \text{(claim 3)}$$

and

$$\sigma = 0 \quad \text{(claim 4)}$$

are equivalent to the antireflection condition mentioned by SANDSTROEM.

This is not exact. Indeed, the SANDSTROEM's antireflection condition corresponds — in the notation of the present Application — to $R_{NP}=0$.

It is this condition which, for $n_0=1$, reduces to $n_1 = \sqrt{n_2}$ (compare equation 1 of SANDSTROEM with equation E10 of the present Application).

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Recall that $R_{NP} = \frac{1}{2}\left(\left|r_p\right|^2 + \left|r_p\right|^2\right)$ — see equation E2 of the present Application — while $\sigma = \left|r_p + r_s\right|^2$. Therefore, there is no obvious or trivial relationship between the claimed conditions involving σ and the well-known antireflection condition $R_NP=0$ cited by SANDSTROEM.

As a consequence, since there is no obvious relationship between the claim to conditions involving σ and the well-known antireflection condition $R_{NP}=0$ cited by SANDSTROEM, the invention as recited in claims 1-3 would not have not been obvious over AZZAM in view of SANDSTROEM.

The dependent claims are believed to be patentable at least for depending from an allowable independent claim.

Claims 11-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over AZZAM et al. and SANDSTROEM et al. and further in view of MEREDITH, Jr., (US Patent No. 5,812,405). That rejection is respectfully traversed.

MEREDITH, Jr. is only cited with respect to features of claims 11-14. MEREDITH, Jr. does not overcome the shortcomings of AZZAM and SANDSTROEM set forth above with respect to claim 1. Since claims 11-14 depend from claim 1 to further define the invention, these claims are believed to be patentable at least for depending from an allowable independent claim.

Claims 16, 18 and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over AZZAM and SANDSTROEM and

further in view of BOGART et al. (US Patent No. 5,639,671). That rejected is respectfully traversed.

BOGART is only recited with respect to features of claims 16, 18 and 20. BOGART does not overcome the shortcomings of AZZAM and SANDSTROEM set forth above with respect to claim 1. Since claims 16, 18 and 20 depend from claim 1 and further define the invention, these claims are believed to be patentable at least for depending from an allowable independent claim.

Claims 21 was rejected under 35 U.S.C. § 103(a) as being unpatentable over AZZAM in view of SANDSTROEM and BOGART and further in view of WACK et al. (US Patent No. 7,130,029). That rejection is respectfully traversed.

WACK is only cited with respect to the features of dependent claim 21. WACK does not overcome the shortcomings of AZZAM, SANDSTROEM and BOGART set forth above with respect to claim 1. Since claim 21 depends from claim 1 and further defines the invention, claims 21 is believed to be patentable at least for depending from an allowable independent claim.

New claims 22-28 are added. Support for these claims can be found in the original claims and in claims 4, 16 and 17.

In view of the present amendment and foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Please charge the fee of $364.00 for the extra independent and dependent claims added herewith to our credit card set forth in the attached Credit Card Payment Form.

The Commissioner is hereby authorized in this, concurrent, and future submissions, to charge any deficiency or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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<u>APPENDIX</u>:

The Appendix includes the following item:

☒ –   a replacement sheet for Figure 2, a sheet for
        new Figure 2A, and sheet for new Figure 2B of the
        drawings